DOCUMENT RESUME

ED 418 330 CE 076 309

AUTHOR	Malloch, Margaret; Cairns, Len; Hase, Stewart
TITLE	Learning in the Workplace: Implications of the Capability Learning Model.
SPONS AGENCY	Australian National Training Authority, Brisbane.
PUB DATE	1998-04-00
NOTE	27p.; Paper presented at the Annual Meeting of the American Educational Research Association (San Diego, CA, April 13-17, 1998).
PUB TYPE	Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Adult Education; *Adult Learning; Case Studies; *Competency Based Education; Delivery Systems; Distance Education; *Education Work Relationship; Educational Technology; Employment Qualifications; Flexible Progression; Foreign Countries; Lifelong Learning; Models; Open Universities; Organizational Development; Partnerships in Education; Postsecondary Education; *School Business Relationship; *Training Methods; Training Objectives; Trend Analysis; *Work Environment; Work Experience Programs
IDENTIFIERS	Australia; *Learning Organizations; United Kingdom

ABSTRACT

The implications of the capability learning model for learning in the workplace were examined in a roundtable discussion of two complementary projects: a study of the ideas and models associated with a range of approaches to workplace training and education in Australia and the United Kingdom and a study conducted to document capable organizations in Australia. The workplace learning study focused on the following models of workplace training in the United Kingdom: open learning/distance education, university and work-based models, training enterprise council programs, and technology-supported programs. The second study examined the relationship between the ideas of capability and the learning organization through case studies of 10 organizations. The following were among the factors identified in the first study as being critical for effective work-based learning: respect for learners; commitment to lifelong learning; belief in the value of learning in a range of settings; partnerships; flexible delivery; structural functionalism; negotiated learning; learning contracts; technology; and external funding and grants. The second study demonstrated that the capability model, which emphasizes "mindful" understanding, adaptability, and flexibility and extension of individuals and organizations, emphasizes the need for explicit in-depth learning but also clearly lends itself to work-based models. (Contains 33 references.) (MN)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 418 330

American Educational Research Association
Annual Meeting, San Diego, April 1998

Learning in the Workplace:
Implications of the Capability Learning Model

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

M Malloch

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Dr Margaret Malloch
Research and Development Department
Northern Melbourne Institute of TAFE
Victoria, 3072, AUSTRALIA
email: margm-rd@nmit.vic.edu.au

Associate Professor Len Cairns
Faculty of Education
Monash University
Gippsland Campus
Victoria, 3842, AUSTRALIA
email: Len.Cairns@education.monash.edu.au

Dr Stewart Hase
School of Social and Workplace Development
Southern Cross University
Lismore, 2480, AUSTRALIA
email:shase@scu.edu.au

This paper reports, in part, on the findings of the Capable Organisations Research Project, funded by the Australian National Training Authority Research Advisory Council (ANTARAC), 1996-1998, and does not reflect, nor purport to reflect, the views of the funding agency.

BEST COPY AVAILABLE

CE 076 309

Learning in the Workplace: Implications of the Capability Model

Abstract

This round table presents two complementary projects. One is a study of the ideas and models associated with a range of approaches to workplace training and education. The basis of these approaches is explored and a number of workplace based educational programs are examined. The nature of specific links and close association of such programs with colleges and universities in the UK and Australia is reported. The conceptualisation and development of these approaches is compared and contrasted with the emerging ideas and models based on the Capability Model of workplace learning.

The theoretical arguments for the increased validity and relevance of workplace learning are examined with particular relevance to situativity and generalizability of training and learning for work.

The significance of the Capability notion and surrounding theory for workplace learning is a key element of this paper. An exposition of the definition of *Capability* and its elements is presented as well as a discussion of the implications for education and training of the extension of this concept to broader bases.

The paper will also present findings relevant to workplace learning arising from a recent research project into the notion of 'Capable Organisations' in Australia.

This project, funded by the Australian National Training Authority Research Advisory Council, has strong relevance and implications for Vocational Education and Training.

Results of the case study approach in both projects will be presented and discussed. Participants in the round-table will have the opportunity to contribute and to explore the concept of *Capability* based on the cases and their interpretation.

Learning in the Workplace: Implications of the Capability Model

A paper presented at the Annual Meeting of the American Education Research Association, San Diego, April 1998.

Dr. Margaret Malloch, Northern Melbourne Institute of TAFE, Assoc. Prof. Len Cairns, Monash University, Gippsland, Dr. Stewart Hase, Southern Cross University.

Introduction

This paper presents two complementary projects. The first is a study of the ideas and models associated with a range of approaches to workplace training and education. The basis of these approaches is explored and a number of workplace based educational programs are examined. The nature of specific links and close association of such programs with colleges and universities in the UK and Australia is reported. The second is a grounded theory case study approach which documents the 'capable organisation' from a range of firms and industries in Australia.

The conceptualisation and development of these approaches is compared and contrasted with the emerging ideas and models based on the capability model of learning.

The theoretical arguments for the increased validity and relevance of workplace learning are examined with particular relevance to arguments surrounding situativity and generalizability of training and learning for work.

The significance of the capability notion and emerging learning theory in relation to workplace learning is a key element of this paper. An exposition of the definition of capability and its elements is presented as well as a discussion of the implications for education and training of the extension of this concept to broader bases.

The paper will also present findings relevant to workplace learning arising from the recent research project into the notion of 'Capable Organisations' in Australia.

This paper draws together two research projects: one exploring workplace flexible delivery of vocational education and training in the UK (and Australia) and the other: The Australian National Training Authority Research Advisory Council project, Documenting Capable Organisations.

Workplace Training, Education and Flexible Learning

Both studies relate to workplace learning and to a 'flexible' approach to education and training in the workplace.

Flexible delivery is often used as an umbrella term to cover a number of distinct but related delivery methods. These include: flexible enrolment, distance education, audio-conferencing, computer based learning, computer managed learning, audiographics, problem based learning, workbased learning, open learning, video conferencing, flexi-mode, self paced learning, resource based learning, independent learning, multimedia, multiple entry and exit points, learner centred, and off campus approaches.

In the vocational education and training sector, the flexible delivery of training is frequently referred to in terms of being a goal, a desirable mode of operation, or even as a criticism of current training and educational forms which are described as more static 'traditional' models. However, what is implied by the term?

A frequent interpretation of flexible delivery is that it is distance education, with the provision of written materials which form self paced training modules with which the students engage in their own time and space.

Another form of flexible delivery currently utilised is to have a teacher go to the workplace and provide a training program for the workers on-site. This may mean for the teachers/ trainers working locally, interstate or overseas.

Flexible delivery may also be a combination of each of these approaches.

Competency based training has impacted on the flexible delivery of training as well. An important aspect of flexible delivery has been the 'modularisation of training' and through the emphasis on the learner working at his/her own pace, there has been a concomitant cutting back on the length of time required for training programs. Under competency based training, the emphasis has been on the skills and knowledge outcomes to be learnt rather than the traditional time in training. Recognition of prior learning is utilised for the formal recognition of experiences and qualifications to provide exemptions, and/or partial credits in training.

Misko (1994) has argued that flexible delivery is an open approach to the delivery of vocational education and training since it allows for a variety of learning strategies. These learning strategies may include:

- competency-based learning;
- discovery learning;
- self-paced learning;
- resource - based learning;
- self-based learning;
- group-paced learning where appropriate;
- mixed mode learning(eg. mixed face-to-face and distance mode, including fleximode);
- integrated on-the-job and off-the-job learning;
- problem-based learning (Misko, 1994:3).

These approaches also 'represent a pedagogical philosophy based on the assumption that learning will improve if it is tailored to the way students prefer to learn. It reflects a social justice philosophy which supports the rights of all members of society to have accessible quality training. Furthermore flexible delivery aims to help students develop the technological, organisational and interpersonal skills to become effective members of a flexible and adaptable workforce' (Misko, 1994:4).

> 'Flexible delivery modes are training approaches which are customised to meet client needs. They represent a shift from traditional group-paced, face-to-face lock step methods of teaching, towards self-paced independent learning. Flexible delivery modes also include resource based and technology-enhanced activities. This indicates a changed role for students and teachers' (Misko, 1994:8).

The landmark Australian Government commissioned review of management education, the Karpin Report (1995:93) referred to workbased learning as being viewed by leading enterprises and writers as the key to enhancing managerial competence. Workbased learning is also defined broadly to encompass formal and informal and both on and off-the-job learning experiences. Workbased learning is described as including the informal modes of coaching, mentoring, participation in working groups focused on specific tasks. It can also occur through trial and error, observation of more experienced workers, imitation of role models and through socialisation into organisational norms (Karpin, 1995:73).

The Capability Learning Model

The Capability Learning Model (Cairns, 1997b), has developed from the basic concept of capability and offers a socio-cognitive model of learning. Capability was developed under the aegis of the Royal Society of the Arts, through the work of Stephenson and Weil (1992) and Stephenson (1993).

Capability is defined as: 'the confident and mindful application of both current and potential ability (competence and capacity) and values within varied and changing situations to formulate problems and actively work towards solutions as a self managed learning process' (Cairns, 1997a).

The Capability Learning Model argues that there are three key elements of self-efficacy, specialist knowledge and skills (competence) and values which intertwine in learning. The model postulates that Capable Learning takes place across a range of 'learning planes' which encompass varying degrees of novelty on the two dimensions of tasks/problems and contexts/situations. Self-efficacy is proposed as the major motivational driver in this model.

A significant aspect of the Capability Learning Model is that it is applicable to both individuals and organisations.

Major features of Capable Learners and Capable Organisations are:

- flexibility and adaptability;
- self-managed learning;
- mindful awareness of capability and learning;
- values-bounded behaviour;
- readiness and confidence to engage the unknown (risk taking).

It is a premise of this paper that the emerging ideas surrounding workbased learning are compatible with this model.

Workplace Learning

The development of what is described as either workplace learning or workbased learning has a powerful and international recent advocacy (Demick and Miller). Among the key aspects of this approach or paradigm are the ideas that work located learning, training or education is better situated for effective learning and application, is more valid as work knowledge, is more directly applicable as site based reality and is a more effective *and* efficient delivery of vocational education and training.

There are issues which have emerged as central to the theoretical debate in the area of the development and application of appropriate models and *sites* for vocational education and training (VET) which have centred on what could be described as 'situativity' versus 'generalizability'. In brief this debate centres on the difference between views of situated learning themes (Lave and Wenger, 1991) and arguments for more general and generalizable training (the transfer of learning tradition). Billett (1996) provides a good overview of some of the issues emerging in the debate.

In essence, if the situated learning (and related concept of situated cognition, Kirshner and Whitson, 1997) arguments are seen as valid, then much of current (and past) schooling, training and tertiary education is questionable in terms of the generalizable application of 'non-situated' learnings. The problem of 'transfer' (Bereiter, 1997) is also a key point of debate - taken up in the schooling context in detail by McKeogh, Lupont and Marini (1995) in their 'Teaching for Transfer' volume.

In an age where Social and Human Capital theories are prevalent in business and industry approaches to training and learning (Becker, 1995, Sweetland, 1996, Vogt, 1997) the significance of the workbased learning paradigm is both evident and necessary when examining change in training for work.

Australia has tended to follow, or to parallel, English policy developments in vocational education and training.

In the 1990's, England identified concerns with the skill development of the populace. There has been an increased percentage of those attending universities and polytechnics, which now have university status.

The number of private providers of training has grown. The national targets for education and training are foundation learning and lifelong learning. Workforce development is defined as investing in people with a national framework of competence based qualifications (Chris Humphries, 1996).

Common elements between Australian and English policy trends in vocational education and training in the 1990's include funding following the learner, employer involvement in training schemes and the shift from TAFE/Further Education Colleges to private providers. The English programs referenced to learner focussed learning and life long learning and awareness of limited options for workers with low literacy levels (Humphries, 1996).

Work related learning in the 1990's in England is described as being viewed as a massive industry with many different types of workplace learning, including the work of consultants, in house training, external continuing education programs, self directed learning programs, quality teams and study teams (Watkins, 1995:7). With organisational changes of processes, culture or structure, learning demands encompass more than training (Watkins, 1995:8). Watkins takes the view that past workplace learning was primarily skills training based on immediate jobs and that in future, workplace learning is to become everyone's responsibility, integrally tied to performance and production (1995:15). Spikes (1995: 87) argues that workplace educators need to consider employee development, that is broad skill based development and career planning. 'Learning must be seen as a primary goal of an increasingly broad-based group of tomorrow's globally competitive firms' (1995:85). Spikes goes on to argue that for more effective use of limited resources public schools, unions and government agencies need to work together to meet the demands of tomorrow's workplace, and that we maximise the value we place on learning, change and growth throughout people's working lives (Spikes, 1995:89).

Forrester, Payne and Ward argue that education is a fundamental way in which people face up to change and that in doing so they face its contradictions (1995:20). They surveyed 40 large employers with about one million employees in 1991, with case studies of 14 employers and their employee development schemes, and carried out semi-structured interviews with employees and managers. The focus for their research was policy formulation in the field of employee development.

BEST COPY AVAILABLE

They argue that England's poor economic performance has been because of inadequate vocational education and training: low standards of education and training producing low productivity and profit, in turn producing low levels of investment and a perpetuation of low standards in education and training (1995:143).

Their research looked at the role of employers, at the learning underpinning the national system of vocational qualifications and the participation rates in workplace training schemes (1995:11). They criticised the use of narrowly based competency training designed to address short term needs of employers, the exclusion of unions from Vocational Education and Training strategy and the lack of reference to experiential learning.

Forrester, Payne and Ward point to European policies and programs for a more inspired scenario: 'that human resource development including recurrent education and training of all employees is important to the individual, the enterprise and the economy at large.' (1995:23) and that joint programs between employers, employees and unions should be encouraged, that education is not only to train people to work, it is becoming part of the social and productive process (1995:42) and that education and training should be seen as life long activities (1995:45).

Study 1
Workplace Learning Study

The objective of this research was to observe and critically examine recent developments in workplace flexible delivery of vocational education and training together with a study of infrastructure approaches to curriculum development and delivery.

The study took place in the United Kingdom in 1997. In the UK, a range of models of workplace training are employed. The research project undertaken involved interviewing and observing a range of programs, primarily delivered by 'new' Universities, the former polytechnic institutions. The range of models looked at included Open Learning/Distance Education - The Open University, University/workbased models (Middlesex, Humberside, Leeds Metropolitan), Training Enterprise Council programs, and technology supported programs, for example, The Scottish Council for Educational Technology and Univentures, a regional small business/employment technology focussed program.

The new universities are offering vocational based courses and, aware of new initiatives, are developing a range of workbased programs which are exciting and practical for the learner.

Examples of Programs

Middlesex University

Middlesex is a former polytechnic, granted university status in the early 1990's. Modularisation of Accreditation of Prior Learning (APL) was introduced in the 1980's. Undergraduate degrees in humanities and social science are modularised. The Centre for Workbased Learning accredits a range of courses at a range of levels. At the beginning of 1997, a doctorate with a workbased component was being introduced. For the teaching programs, the Centre created a stock of modules to enable programs to take place in accredited, validated modules. The Centre started in 1993, with 43 students to 1997 - 12 staff and 500 students. Work is in the UK, and now overseas, for example in South Africa and Kazakistan. The Centre for Workbased Learning won a 1997 Queen's Award for their work.

Work is undertaken with others as partners, not as 'clients' with recognition of previous learning and recognition of learning which is work focussed, customised to give employers/organisations what they wanted. The learner, the employer and the university are partners in the negotiated learning contract for the study to be undertaken.

Employers indicate a preference for flexible programs, meaning flexible mode of delivery, pace, and a curriculum which is not fixed. Each module at Middlesex is written with a series of generic outcomes and is quality assured. Flexibility is built in within this framework.

For workbased learning, a learning contract has to be signed by the employer as well as by the learner and this forms a 'learning agreement.' Capability is important in affecting attitudes and philosophy, taking workbased learning and making it more tangible.

With regard to research and learning, 'the curriculum' is in the workplace and the key to all learning in the workplace is through the 'work roles' and not merely through the learners' skills. Learning is through the work role: the individual has their own curriculum and then can capitalise on this.

The National Centre works with cohorts of employees and still works with individuals, drawing on taught materials, using the full range of all university awards, from certificate, diplomas to degrees. Employees were not interested in honours degrees, but in very focussed, shorter courses. The ordinary degree has some popularity and the postgraduate field is seen as potentially a massive market.

Middlesex now has a doctorate which can be undertaken incorporating workbased research. Students include senior people from organisations doing major developmental work, and involved in trying to bring about significant change, for example, senior Government, clerical and university personnel researching the training of clergy and organisational cultural change. There had been a healthy number of enquiries for an initial cohort of fifty. Courses begin with a workbased research methods unit. APL is a component, a part of the customised program. Prior and workbased learning are accredited and become part of current learning. The notion that it is separate is being fought against. The Centre is also working towards eliminating the need for competencies which focus on developing the abilities of people relevant to that industry. The Centre developed a higher workbased certificate which meant the National Vocational Qualifications were not needed. Middlesex University in 1998 has initiated an International Centre for Lifelong Learning.

Humberside University

Humberside University has 14,000 students, 3,000 students are international. Humberside has links with University of Technology Sydney, University of New England, Western Australia and Monash Universities.

Structural policies and more flexible modes of study are becoming increasingly important and are embedded as part of the university and drives strategy. There is a huge investment in a staff development program, particularly aiming at changing attitudes.

They are attempting to develop 'a learning system' with skills and capabilities as strands. Their mission is based on capability and individual learning with five strands: academic structures, learning materials to support active learning, the use of technology, staff-roles, attitudes and skills and students. The culture is one of development. Learners and the University are collaborative partners in learning for life.

The technological infrastructure to support learning is important. One project involves the introduction of courses which are computer and paper based with some 'ordinary' classes with lecturers. Students have access to a tutor for an hour a week in groups of eighteen. They can access the computer modules through computers on the university site and other sites being made available. Students train in library, IT skills, word processing and windows. Tutors monitor student progress and students get updates on their results from easily accessible computers. The next step is to establish satellite links.

At first, the staff/student evaluation of the computerisation to date was negative, but the University is persisting with the innovations. In the Engineering Faculty at Humberside, a small group of students, as part of their studies design, develop and produce computer programs for their course of study; a computer expert works with them. They were transferring lecturers' notes onto a computer program, designing diagrams, and multimedia components of programs - to make the notes more 'alive.' Staff cutbacks have assisted in funding the project and using the computer programs replaces a strand of lectures. There are plans to have all courses using computer modules by 1998.

West Yorkshire Playhouse

The West Yorkshire Playhouse is active in a wide range of community and people oriented projects. A mentoring and work experience project with local schools is conducted; a Ph.D student is developing a software computer program to link the local community, and schools in particular, with the Playhouse; another program is a workbased course run in conjunction with Leeds Metropolitan University for young black artists to gain qualifications, with acknowledgment of prior experience, in conjunction with Leeds Metropolitan University.

The Theatre works with 50 secondary and 250 primary schools in the West Yorkshire region. An advisory teacher is working on site providing programs for teachers and students. Plans are underway for a scientist to be involved in a similar program.

It is part of the philosophy of the organisation that it is integral to have young people know about the theatre and to be part of the life of the city. The artistic policy is constantly referred to and evaluated against all work carried out.

For their own staff development, a number of staff are undertaking workbased studies in conjunction with Leeds Metropolitan University. As a pilot phase six staff are doing postgraduate work, Masters of Arts, choosing to develop their own professional skills. The Associate Director of the Arts Development Unit initiated research with the Leeds Metropolitan University Business School to work out how they are successful, exploring new ideas on how to progress and tying this together with the staff studies, to achieve a tailor made program for development for the West Yorkshire Playhouse. They are exploring ways of breaking down the administration/production divide, so that people's skills, talents and experiences are used and traditional boundaries crossed. The artistic director is against training which provides people with narrow skill based training on a single aspect of work.

The workbased study program consists of an agreement between the individual learner, the Playhouse (the workplace) and the University. An initial learning contract is worked out with a tutor, regular meetings are held to refine project topic, background research is carried out, contracts are ratified, the level of study determined, this goes to a Senate Committee for approval, then the project carried out and handed in. One student working at the Playhouse had for her project developed a business plan for her department with a development focus, for fundraising and corporate relations. The study program consisted of preparing the initial learning contract, a series of position papers, a major essay, presentation of a portfolio and an ongoing learning diary. The study program is totally integrated with the learner's work. The program had a powerful and empowering impact on the learner. A learning set (a group of fellow students) provided additional support and interaction for those studying. Two of the set members were from the Playhouse and two from other workplaces. The tutor comes to the workplace for meetings. Contact is also available by e-mail.

Univentures International Limited

Univentures is an independent company with an Advisory Board which developed from the Business School of Leeds Metropolitan University. They have received grants from the European Union allocated to work in areas where coal mines had closed down., addressing economic degeneration. The Leeds area in the past decade had lost 12-14,000 jobs, mostly in underground mining. The organisation's aim is to build up an indigenous local base within the area, with a series of programs to raise the levels of educational achievement and to also bring in big business to the Wakefield area. Big companies wouldn't come into the area, so Univentures set about creating new technology businesses in West Yorkshire to attract business for the future.

'The aim is to encourage individuals to team together to develop robust plans for introducing products into the UK and European markets, whether as distributors, licensed manufacturers, joint venture partners or subsidiaries.' The teams are expected to launch their ventures at the end of the program. At the start of 1997, 12 new businesses had been formed (Univentures 1997). The courses run by Univentures are not workbased in that people undertake a mixture of study and workplace training, but rather a preparation for work in a new direction, for developing and running a business, a regeneration for unemployed people located in a depressed economic area.

Courses run for thirteen weeks, designed to incubate business development. People are put together in teams, with a strong focus on learning by doing and real life learning. The participants start off by developing a business plan. In the first program, a modular approach was used, for example, team building, marketing and research. This was assessed as not fitting in with real life learning. For the second cohort, the program was laid out as would be encountered in real business.

The sessions are held in the evenings, twice a week. In the first three weeks there is a focus on team building and support, identification and introduction of products. There is a residential weekend three weeks into the program. Participants are called delegates and sign a contract with Univentures to cover confidentiality; what is delivered and that they will pay a royalty on successful product sales. Univentures broker the product.

Local business people and consultants serve as mentors (paid a nominal fee), to program 'delegates,' with communication aided by video conferencing.

The participants attend the course, carry out practice and keep a journal of reflective practice. It is assessed as a short vocational and professional development stream giving points towards an Advanced professional development diploma. Accreditation was difficult to obtain and was finally gained in 1996. The award is linked to funding. From the first cohort, the majority formed business teams; from the second cohort, 75% formed companies with products. For every successful product launched, Univentures receives a royalty. There is a strong focus on achieving results. Univentures supports the people in the teams after they've started their businesses. Teams have developed innovative software in security and reservations. Seven programs had been run to the beginning of 1997; all participants who want to stay in touch do so through ongoing networking and a club. Networking and product development have overseas links and input.

Univentures want 'entrepreneurs who are into wealth production.' It is a highly focussed program. They are moving forward with industry and with the university and are using their capability.

Workplace Trends in Australian Vocational Education and Training

In Australia, the current vocational education and training policy emphasis is on delivery in the workplace. With an aging workforce, the multiskilling of adults, and multiple career changes, flexible training and move from classroom focussed learning was advocated. Professional development needs of teachers were also recognised as needing to be addressed (Tony Greer, 1996). The government aims are to expand traineeships into new industries, have greater community and regional involvement and are looking to business to take a leading role in training. Vocational training is being extended to delivery in the schools sector (Greer, 1996).

To this end, Industry Training Advisory Boards, under the aegis of the Australian National Training Authority have developed National Training Packages, which provide a framework for training.

The Training Packages consist of competency standards, assessment and qualifications, measure performance against endorsed competency standards developed by industry and provide qualifications based on assessment of actual competency. Learning models and professional development for trainers are included. They cover all vocational qualifications and are nationally endorsed (ANTA, 1997).

Technical and Further Education Institutes continue to operate, but private provision of training is actively encouraged. Large industries and organisations, such as Toyota, Ford, BHP, have a history of developing and delivering their own training programs; smaller businesses are now encouraged to follow suit. Employers may choose training to be carried out by a registered training provider, a Technical and Further Education Institute or private training provider, training in the workplace, or a combination. Technical and Further Education Institutes and private providers of vocational education are now known as Registered Training Organisations.

There are many examples of flexibly delivered workbased programs carried out in Australia. The following examples provide a snapshot of work carried out. Some workplace/tertiary institution programs have been developed, for example, the Bachelor of Applied Science at Deakin University (Beeson, 1993).

This degree was introduced in conjunction with Box Hill College of TAFE in 1990 after a survey of manufacturing and computing companies to determine needs. The first cohort of 32 students were employees at Ford and Nissan car manufacturers. By 1993, there were 545 students enrolled in the degree from a variety of workplaces. Self paced learning and individualised learning materials were supported by tutorials at the workplace; lecturers were in contact with students via e-mail. Steering committees were established at the larger companies. A Computer Managed Learning System was used to determine order of learning activities and to record learners progress.

The School Based Bachelor of Teacher Education at Monash University Gippsland is another university workplace based program. Started in 1996, this program has final year teacher trainees based for a semester in a school, with electronic communication links to the university, regular visits by the supervising lecturer and a schedule of tutorials.

This program emphasised negotiated curriculum and the development of self managed learning. The cohort is small, at 16 students participating in 1998. Employment prospects of students have been excellent.

An example of a model of 'integrated training' are the training programs conducted at Holden, Ford, Nissan, Toyota and Mercedes as part of a project undertaken by the National Automotive Language and Literacy Coordination Unit, and funded by the Workplace English Language and Literacy program. These programs utilised a collaborative process of continuous improvement in training. Literacy and numeracy programs were integrated with on the job operations, issues and problems. The curriculum and implementation were designed to be enterprise specific and responsive, sensitive to the employer and to the learner. A combination of classroom and factory floor delivery was used. (Sefton, Waterhouse, Deakin 1994: 27-28).

Study 2

Documenting Capable Organisations (Australia)

The Australian National Training Research Advisory Committee project 'Documenting Capable Organisations and Workplaces with Implications for Vocational Education and Training' (Hase, Cairns and Malloch, 1998, forthcoming) employed a grounded theory methodology (Strauss and Corbin, 1990) for its research. A sample of ten organisations were studied as case studies with selection based on questions developed by the Australian Capability Network including '....what constitutes a Capable Organisation, the organisational structures for developing Capable people, the relationship between the ideas of Capability and the Learning Organisation, how developing Capability increases organisational effectiveness, and how Capability relates to competencies, competency based training and vocational education and training in general' (Hase, Cairns and Malloch, 1998, forthcoming).

A series of interviews were carried out and these were analysed utilising the computer program 'Scenario' (Brooks and Daley, 1997). The study set out to gain from the interviews and the development of the case studies, an overview of the elements manifested by the organisations in their structure, operations and as perceived by the workers themselves.

The ten organisations were: an engineering international consulting company, a cement manufacturer, a large construction and mining company, a special Koorie (Aboriginal) school, a large city council, a cable manufacturing company, a section of the Taxation Department, a sub-section of Technical and Further Education College, a large chemical manufacturing company, and a state road authority.

Creativity, innovation and contributions by the total workforce were valued. Shop stewards at the chemical manufacturing company believe their company is different and innovative, especially when they consider other companies: 'They're still locked up in the boxes that people with brains are people with suits, people in offices and they've got titles, ...- those barriers have largely been broken down. People value opinions, value leadership and not necessarily tied to titles.'

> '...under the old structure and the old ownership we were always followers, followers in the terms of the style of negotiations, the outcomes, the quantum, the timing, a whole lot of things, we were followers in industry. I think one of the things again that stands this company apart is that we're now exploring far beyond what others are doing, so their preparedness to be creative, to look at ... creative solutions to timely problems'. (Interviewee in Hase, Cairns and Malloch, 1998, forthcoming.)

Thinking 'outside the box' was valued.

> 'All they had to think of in the past is doing a job within a defined box, so by all this other development being available to them they're there working outside of the box. Yes, they do have their roles to perform but it's a much wider role now that includes a lot of other aspects that before was done by ... other people in again defined boxes so there was a very rigid sort of structure'. (Interviewee in Hase, Cairns and Malloch, 1998, forthcoming.)

Team work was also valued.

> 'The job itself now isn't just confined to the nuts and bolts, it's confined to what is it going to take for the team to manage itself satisfactorily and that includes a whole host of other things that in the past were foreign to the ....award people. There were tasks that were performed by managers, supervisors, superintendents, foremen - you name it - now all those titles and all those positions are obsolete, the team is responsible to ensure the delivery of a cost effective safe service.' (Interviewee in Hase, Cairns and Malloch, 1998, forthcoming.)

BEST COPY AVAILABLE

'... it's no longer just the mechanical skills that we're asked to sort of use, we're asked to use a whole host of other skills. So there is that hunger to learn all those other skills.' (Interviewee in Hase, Cairns and Malloch, 1998, forthcoming). Communication and participation in decision making are important.

> 'Well, decisions were made behind closed doors and then they tried to sell it. It never worked because the first thing people looked for was the hidden agenda, they never listened to what was being proposed to them, whereas now they're part of that dissemination of information so they understand it.' (Interviewee in Hase, Cairns and Malloch, 1998, forthcoming.)

The chemical manufacturing company utilised competence based training to provide skills development and upgrading and drew on capability as a concept to guide organisational development. The structure of the organisation provided for ongoing workbased learning.

The engineering and construction company also valued learning in the workplace - 'Learning is linked to performance management at the end of the day. We are after our people to perform to the optimum. We're selling the intellect of our people and so have a vested interest in learning, in ongoing learning'. (Hase, Cairns and Malloch, 1998, forthcoming.)

Competency based training was found to be important in skills formation and this formed an important foundation for further development. 'One of six key basically business objectives for the year really revolved around continuing to develop the learning capabilities of our people and growing ...all this, their skills and breadth of knowledge.' (Hase, Cairns and Malloch, 1998, forthcoming.)

Learning from mistakes and problem solving with other workers were other important factors.

> 'Where in the past the person who gave the technical support was in charge, he was the foreman, if it went wrong he wore it. Now, the individual, the operator would say to the technical process guy, 'Look I've got a problem. I can't nut it out. What do you think I should do?' The responsibility still lies with the operator so they're having to think more, they're being challenged more and they're coming up with the goods more.' (Interviewee in Hase, Cairns and Malloch, 1998, forthcoming.)

Flatter organisational structures and greater participation of the workforce in the organisation are leading to greater utilisation of individual strengths. 'We need them to bring their brains with them because the person who's doing the job has got a far greater capability in coming up with cost cutting solutions than the person who doesn't do the job.' (Interviewee in Hase, Cairns and Malloch, 1998, forthcoming.)

Other factors found to be important in encouraging organisational capability were the development of a learning culture, of work being intrinsically rewarding, of there being a positive quality of working life and a strong identification by the workers with the organisation's vision and values. The case study organisations expressed a strong commitment to training and to ongoing learning and education, of depth and breadth as well as industry specific learning.

Key Findings from Study 1

- *Respect for learners*. In all cases meeting with educators, administrators, business arms of organisations, there appeared to be a genuine respect for learners - for people of any age, participating in further education and training

- *Commitment to lifelong learning*. Learning the concept of lifelong learning has been endorsed and promoted as an informing concept for the past five years. In OECD studies the United Kingdom workforce was lagging behind that of other nations in levels of education and training and skills; it was therefore important that retraining, returning to education be endorsed and promoted in national economic interests and also with concern for individual development.

- *Belief in value of learning in a range of settings*. Learning occurs all the time and in a range of settings - formal and informal, university, workplace

- *Partnerships*. Polytechnics/Universities and business arms of organisations always referred to others taking part in joint projects as partners and as working in partnership; there is also a partnership between learner and the organisation facilitating the learning

- *Partners not clients.* The participants in the learning contracts, and programs are partners not clients.

- *Flexibility in delivery, in structure.* Flexibility of delivery is viewed in a variety of ways, but the important underlying feature is the importance of structural congruence and support

- *Structural functionalism; form follows function.* Organisational structures support the flexibility of delivery, of programs, in that funding, enrolments, accreditation, program development and delivery, assessment, reporting are all a coherent whole, integrated, supported by the organisation.

- *Negotiated learning.* Study and training programs are negotiated between the learner and the representative of the educating body - university, training council, college

- *Learning contracts.* These are the agreements between the learner and the educating/ training body as to the program, its contents and delivery and expectations and obligations.

- *Technology used as a tool to enhance learning.* Technology, including computer programs serve the education programs, and facilitate a wider range of communication, access to information and other people, skill development, serving the purposes of the education program and not the key focus of learning activity

- *External funding and grants.* Funding appeared to come from two major areas, European grants and lottery grants. Projects visited had gained successfully gained large grants.

- *European focus on regeneration.* The European Community provides extensive funding for projects which are helping to rebuild the depressed former industrial and manufacturing areas, particularly in middle and northern England. There is a focus on training unemployed people and encouraging the development of new businesses.

Recommendations from Study 1

- That flexible delivery be viewed in an holistic way.
- That the teaching and learning strategies employed be served by the delivery modes used.
- Delivery is meant to assist learning, not to be the key focus.
- That people and learning are the focus of education.
- That technology serve the furtherance of learning rather than learning serve the deification of technology.
- That to be successful, flexible delivery is positioned within an organisational framework, with support of appropriate funding, accreditation and resources.

Recommendations from Study 2

The following are drawn from the findings and implications contained in the Study. (Hase, Cairns and Malloch, 1998, forthcoming.)

- That training programs, for example competency based training, form a basis for acquisition of required knowledge and skills.
- That opportunities for multiskilling are developed from competency based training.
- That self managed learning promotes greater capability in the learner.
- That team based structures enabling worker participation in decision making, access to information and responsibility for work contribute to organisational capability.
- That the trainer's role for workplace/workbased training and learning become that of a facilitator.

- That management training emphasise leadership skills as well as technical skills.

- That seamless post compulsory education will assist organisations in developing their people.

- That partnership arrangements between learners, providers and workplaces may assist in the development of capable people.

- That vocational education and training focus on a more holistic development of people for the modern workplace (including those already in the workforce, school leavers and the unemployed).

Conclusion

Learning may be effectively situated within the workplace. In both studies, positive examples were found for the benefits of learner managed learning, negotiated learning, teamwork, flexible combinations of the delivery of learning and both studies supported the idea that Vocational Education and Training carried out on the worksite can be effective. The valuing of experiential learning, with support from coaching, mentoring and peer support were other positive components of workbased learning. Technology was used in a variety of forms to aid communication and extension. The examples in both studies went beyond specific skill training: the 'whole' person was engaged in a learning process and program.

Situated learning is of relevance for education and training for work. There are implications for vocational education and training, particularly in the teaching and learning strategies employed as well as for the delivery. 'Facilitation' rather than 'training' was emphasised in both studies. As Lave and Wenger state: '...learners inevitably participate in communities of practitioners and that mastery of knowledge and skill requires newcomers to move toward full participation in the socio-cultural practices of a community' (1991:29).

Situated learning is but one aspect when considered within the notion of cyclical learning. Thorne, (1995:177) with reference to Kolb, (1984) stresses that reflection on experience and relating of this to general principles helps us plan future actions and that many require assistance to be able to do this. Relating experience to a body of knowledge within the context of theories and concepts also requires learning assistance. Workplace learning, whilst pragmatically effective, may potentially lead to procedural learning, therefore detailed analysis of what lies behind actions needs to be a focal point.

The Capability Model, with its emphasis on 'mindful' understanding, adaptability and flexibility and extension of the individual as well as the organisation, emphasises the need for explicit in depth learning. Whilst capability also emphasises generalizable elements of adaptive and flexible responses, the concept lends itself clearly to workbased models.

References

Australian National Training Authority. (1997), *Guidelines for Training Package Developers*. Australian National Training Authority. Queensland.

Becker, G.S., (1993), *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education*, 3rd Edition, University of Chicago Press, Chicago.

Beeson G.W., Stokes, D.M., Symmonds, H.C., (1993), *Flexible Delivery to the Workplace of a Bachelor of Applied Science Course. An Evaluation*. Australian Government Printing Service. Canberra.

Bereiter, C., (1997), "Situated Cognition and How to Overcome It", Chapter 2 in Kirshner, D. and Whitson, J.A (eds), *Situated Cognition: Social, Semiotic, and Psychological Perspectives*. pp281-300.

Billett, S., (1996), "Situated Learning: Bridging Sociocultural and Cognitive Theorising". *Learning and Instruction* Vol. 6, No. 3 pp.263-280.

Brooks, L., and Daley, S., (1997), Scenario Computer Program. R & D Integral Research, Woodburn, N.S.W.

Cairns, L.G., (1997b), "The Capability Learning Model", President's Address, Australian Capability Network 3rd Annual Conference, Sydney, October.

Cairns, L.G., (1997a), Defining Capability for Education, Training and Industry. A Discussion Paper No.1. Washington, USA..

Chawla, Sarita and Renesch, John, (eds.) (1994), *Learning Organisations Developing Cultures for Tomorrow's Workplace*. Productivity Press, Portland, Oregon.

Demick, Jack, Miller, Patrice, M., (eds) (1993), *Development in the Workplace*. Lawrence Erlbaum Associates Publishers Hillside, N.J.

Forrester, K, Payne, J and Ward, K. (1995), *Perspectives on education, training and work*. Avebury Ashgate Publishing Ltd, Hants. England.

Greer, Tony, (1996), Presentation at the Victorian Association of Directors of TAFE Institutes Annual Conference, Melbourne.

Hase, S., Cairns, L.G., and Malloch, M. E., (1998, forthcoming),*Documenting Capable Organisations and Workplaces with Implications for Vocational Education and Training*. Report to ANTARAC/NCVER, Lismore, NSW.

Humphries, Chris, (1996), Presentation at the Victorian Association of Directors of TAFE Institutes Annual Conference, Melbourne.

Kirshner, D., and Whitson, J. A., (eds) (1998), *Situated Cognition*. Lawrence Erlbaum Associations. Mahwah. N.J.

Kolb, D., (1984), *Experiential Learning*. Prentice Hall, New York .

Lave, Jean and Wenger, Etienne (1991), *Situated Learning Legitimate Peripheral Participation*. Cambridge University Press, USA.

McKeogh, A., Lupart, J., and Marini, A., (eds) (1995), *Teaching for Transfer: Fostering Generalization in Learning*. Lawrence Earlbaum Associates, Mahwah, New Jersey.

Misko, Josie, (1994), *Flexible Delivery. Will a client focused system mean better learning?* NCVER, Adelaide.

Norris, Stephen P (ed.) (1992), *The Generalizability of Critical Thinking Multiple Perspectives of an Educational Ideal*. Teachers College Press, New York

Report of the Industry Task Force on Leadership and Management Skills (1995), Enterprising Nation. Renewing Australia's Managers to meet the Challenge of the Asia - Pacific Century, Volume 1. (Karpin Report), Australian Government Publishing Service, Canberra.

Sefton, R., Waterhouse, P., Deakin, R., (eds) (1994), Breathing Life Into Training A Model of Integrated Training. National Automotive Industry Training Board. Australia.

Spikes, W. F., "Future Directions in Workplace Learning" in Spikes, W. F., (ed) (1995), *Workplace Learning*. Jossey Bass Inc. San Francisco.

Spikes, W. F., (ed) (1995), *Workplace Learning*. Jossey Bass Inc. San Francisco.

Stephenson, J., (1993), Lecture Notes for Capability Talks, Australian Visit, HEC, Leeds.

Stephenson, J., and Weil, S., (1992), *Quality in Learning: A Capability Approach in Higher Education*, Kogan Page, London.

Strauss, A., Corbin, J., (1990), *Basics of Qualitative Research. Grounded Theory Procedures and Techniques*. Sage Publications. USA.

Sweetland, S.R., (1996), "Human Capital Theory: Foundations of a Field of Inquiry", *Review of Educational Research*, 66, 341-359.

Thomas, Diana (ed) (1995), *Flexible Learning in Higher and Further Education*. Cassell Education, Gr. Br.

Thorne, P., "Supporting, Assessing and Accrediting Workplace Learning". in Thomas, Diana (ed) (1995), *Flexible Learning in Higher and Further Education*. Cassell Education, Gr. Br.

Univentures International Limited. (1997), Promotional Material. Leeds.

Vogt, W.P., (1997), "Educational Capital: Human, Cultural and Social", Paper presented at American Educational Research Association Conference, Chicago, March.

Watkins, E., "Workplace Learning: Changing Times, Changing Practices" in Spikes, W. F., (ed) (1995), *Workplace Learning*. Jossey Bass Inc. San Francisco.